LASTA SD is a horizontal filter press, designed to meet the customer’s requests for 24 hrs fully automatic operation in production process of various industries. To meet the ever increasing demands of various customers for slurry dewatering, ISHIGAKI, based on years of experience and practical know-how, developed a unique press to provide perfect cake discharge, efficient cloth wash and short cycle time.

Features

1. Fully Automatic Operation, Perfect Cake Discharge
LASTA SD is designed for 24 hrs operation with our Cloth Travelling System for Fully Automatic Operation, even thin Cake, 3mm, can be easily discharged automatically.

2. High Production Capacity
LASTA SD is designed for high production capacity. All functions including Simultaneous Open & Close, Simultaneous Cloth Washing and Double-End Feeding Design lead to short cycle time and subsequent high production capability of LASTA SD.

3. Excellent Performance
All filter cloths are washed simultaneously at the lower edge of the plate pack, leaving no cake residue. The efficient cloth wash helps contribute to high and consistent performance of LASTA SD. In addition, effective Cake wash and Air blow are possible due to the Top Feed Port.

4. Superior High Dryness Dewatering Performance
LASTA SD is designed to process the slurry effectively and produce filter cake with higher dry solids.

Application

| Agricultural Products | Sludge<br>•Municipal<br>•Industrial<br>•Alum<br>•Blast Furnace<br>•Metallic Compounds<br>•Oxide<br>•Hydroxides<br>•Carbonates<br>•Sulphates | Mineral Concentrates, Tailing, Residue & Leaching<br>•Copper<br>•Zinc<br>•Iron<br>•Nickel<br>•Silver<br>•Gold |
|----------------------|--------------------------------------------------|
| Fermentation         | Mineral Products                                 |
| Gypsum               | Chemical processes                               |
| Kaolin               | Talc                                             |
| Oil Extraction       | Pigments                                         |
| Chemical processes   | Resins                                           |
| Talc                 | Cement                                           |
| Pigments             | Coal                                             |
| Resins               |                                                  |

Operation Sequence

1. Plate Closing
When the start switch is activated, the hydraulic pump operates. The hydraulic cylinder clamps the filter plates, thus forming a filter chamber.

2. Feeding
The slurry is fed via the feed port at the top of the filter plate. The solids in the feed build up as dry cake while the filtrate exits through the filtrate ports.

3. Compression
Upon completion of the feeding process, pressurized water or air is injected into the diaphragm. The filter cake is further compressed and dewatered.

4. Plate Opening
After the compression process ends, the hydraulic pump automatically operates, driving the hydraulic cylinder and opening the filter plates.

5. Cake Discharge
When the filter plates are fully opened, all the filter cloths automatically travel down, around the lower plate roller and discharge the filter cake.

6. Cloth Wash
After the cake discharge is complete, the filter cloth returns to its original position. A cloth wash can then take place with the automatic cloth travel system.

Flow Sheet

※1. This flowsheet includes the cake wash process.
※2. Air blow is an option for the process.
LASTA MC is a horizontal Filter Press, which has been designed for relatively easy to discharge filter cakes as with Mineral Applications. To meet the increasing demands of mining industry slurry dewatering applications, ISHIGAKI, based on years of experience and practical how-how, developed a press to provide high discharge consistency, reliability and performance, coupled with a greatly reduced maintenance requirement.

Features

1. **Fully Automatic Operation**
   LASTA MC is designed for 24 hrs operation, with a Cake Discharge Monitoring System and a Back-Up Mechanism for Fully Automatic Operation. In the event some cakes remain in the chambers, this System activates automatically for perfect Cake Discharge.

2. **High Production Capacity**
   LASTA MC is designed for high production capacity. All functions including Simultaneous Open & Close, Simultaneous Washing and Double-End Feeding Design lead to short cycle time and subsequent high production capability of LASTA MC.

3. **Excellent Performance**
   All filter cloths are washed simultaneously from above the plate pack, leaving no cake residue. The efficient cloth wash helps contribute to high and consistent performance of LASTA MC. In addition, Cake wash and Air blow are possible due to the Top Feed Port.

4. **Robust and Simple Design**
   LASTA MC is mechanically simplified and has been designed with fewer moving parts, which leads to easy maintenance even under severe conditions. Especially the filter cloth for each individual chamber can be quickly and easily replaced.

Application

- Mineral Concentrates, Residue, Tailing & Leaching
- Cement
- Coal
- Copper
- Zinc
- Iron
- Nickel
- Silver
- Gold

Efficient Filter Cloth Wash System

One of the key factors to high press availability and low cloth maintenance lies in the ability to wash the filter cloth efficiently. With the cake doors closed and the press open, the stationary shower bars are actuated, washing the exposed cloths. The wash water flows down the face of the cloths efficiently cleaning. The shower bars and nozzles are positioned above the chambers to eliminate the potential of clogging from filter cake and do not obstruct filter cloth replacement.

**Discharge Monitoring System and Back-Up Mechanism**

If abnormalities in the operating process arise and result in incomplete cake discharge after press opening, a photo-electric beam will detect its presence and a back-up discharge mechanism will be automatically activated. Two vibration rails running the full length of the press are mounted to lifting cylinders. Upon activating the mechanism, the rails are raised coming into contact with the lowered cloth support assembly and its attached cake. A vibration force is transmitted to dislodge the filter cake. After a preset time the vibrators are turned off and the rails return to their "down" position.
The wash water is fed from filtrate port of one plate; it passes through the cake and then discharged from the filtrate port of the next plate.

Standard LASTA’s consists of mild steel and stainless steel frame, PP filter plate and rubber diaphragm. Other materials are available to suit customer’s requests.

Wash water passes through the filter cake, foreign substances in cake are removed or precious substances in cake are extracted.

Option

Diaphragm Pressure

Material Option

Cake Wash System

- Normal Cake wash
  Wash water is fed into each chamber from the top feeding port, passing through the cake and discharged via the filtrate port.

- Back Cake wash
  The wash water is fed from filtrate port of one plate; it passes through the cake and then discharged from the filtrate port of the next plate.